Draft Rationale for Forest Roads:

The Board of Forestry has made several improvements to general road maintenance measures to improve water quality. Changes made in 2002 and 2003, included: (1) establishment of a "Critical Locations" Policy for avoiding the building of roads in critical locations such as high hazards landslide areas, steep slopes, or within 50 feet of waterbodies; (2) creation of additional rules to address wet-weather hauling (OAR 629-625-0700), and (3) revision of an existing road drainage rule to reduce sediment delivery (OAR 629-625-0330).

These improvements will help reduce sedimentation from roadways. However, the NOAA and EPA remain concerned that a significant percentage of the road network on forest lands in Oregon continues to deliver sediment into streams, and that new drainage requirements are triggered only when new road construction or re-construction of existing roads occurs. The rule changes and new policies do not sufficiently address water quality impairments associated with "legacy roads" (e.g., roads that do not meet current State requirements with respect to siting, construction, maintenance, and road drainage) or impairments associated with a large portion of the existing road network where construction or reconstruction is not proposed.

While harmful impacts to salmon from roads, landslides and lack of riparian protections are mentioned in many reports and early on in the Coastal Salmon Restoration Initiative (CSRI) process, a September 10, 1996 NMFS memo identifies "Roads Related Problems" as one of the serious inadequacies in the CSRI. In its memo, NMFS indicated that the revised forest practice rules have no well-defined process to identify problems with older logging roads and railroad grades constructed under previous forest practices (prior to 1994).[1] NMFS also indicated that Oregon's proposed measures to address roads, i.e. ODF CSRI measures 1-3 for culverts, stream crossings, skid trails, and ODF measure 10 for voluntary identification of high risk erosion sites, apply to roads post 1994 construction ( for measures 1-3) and post 1973 construction (for measure 10). Additionally NMFS provided that "over the last century forest practices have left many older roads and railroad grades, i.e. 'legacy' roads. Only roads that have been used since 1971 are addressed by the rule". NMFS also explains that "According to the ODF, there is no process for any state agency to inspect or address the potential slope failures associated with these legacy roads. Monitoring done in 1988 found these older roads were major sources of landslides"[2]

In an April 1996 memo from NMFS's Elizabeth Gaar to OCRM Patty Dornbusch regarding "Comments on State of Oregon's 6217 Program Submission, Gaar states that "There is no process to identify road problems, properly maintain or upgrade existing roads including older logging roads…This issue of 'legacy roads' is widespread and remains unaddressed by any state agency. These are the single biggest potential sources of sediment to fish streams."[3]

In its September 14, 1999 Technical Report 199-1, Oregon's Independent Multidisciplinary Science Team (IMST) found that "'Old roads and railroad grades' on forestlands, sometimes called legacy roads, are not covered by the OFPA rules unless they are reactivated for a

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current forestry operation or purposes. IMST believes the lack of a mechanism to address the risks presented by such roads is a serious impediment to achieving the goals of the Oregon Plan. A process that will result in the stabilization of such roads is needed, with highest priority attention to roads in core areas, but with attention to such roads and railroad grades at all locations on forestlands over time.[4]

The State's voluntary Oregon Plan for Salmon and Watersheds (Oregon Plan) helps improve roads that contribute to water quality impairments, including legacy roads. However, Oregon has not provided a sufficient description of this voluntary effort to enable the State to demonstrate that the Oregon Plan satisfies the forest roads element of this condition. As the federal agencies' *1998 Final Administration Changes Memo* states, in order for states to rely on voluntary programs to meet coastal nonpoint program requirements, a state must, among other things: (1) describe the voluntary program, including the methods for tracking and evaluating those programs, the State will use to encourage implementation of the management measures; and (2) provide a legal opinion from its Attorney General asserting the State has adequate back-up enforcement authority for the voluntary measures and commit to exercising the back-up authority when necessary. While the State has provided the federal agencies with a legal opinion detailing the suitability of its back-up authorities, the State has not provided (either in writing or through past practice) a commitment to exercise its back-up authority to require implementation of the additional management measures for forestry roads, as needed. Also, the State has not provided the federal agencies with specific data to document the effectiveness of voluntary efforts to determine the extent of forestry road miles not meeting current road standards within the coastal nonpoint management area. This information could enable the federal agencies to determine if the voluntary improvements through the Oregon Plan have significantly addressed legacy road issues.

The ODEQ presented a conceptual road strategy to the technical workgroup supporting development of the pilot Mid-Coast Basin IR-TMDL that included specific inventory and reporting metrics for all roads, including forest roads, to help identify areas where road improvements have been made, where problem areas still exist and opportunities for improvement. In its July 1, 2013, submittal, the State also noted its intent to establish a roads survey program by 2014 and stated that it has entered into a cooperative agreement with the U.S. Department of Agriculture Forest Service to update its State-wide forest road geographic information data, a needed step for developing a road survey. (I plan to talk with USFS this week to see the progress being made on the monitoring program.)

The federal agencies encourage the State to move forward with establishing a road survey or inventory program. To support an approvable coastal nonpoint program, the program should establish, among other things, a timeline for addressing priority road issues, including retiring or restoring forest roads that impair water quality, and a reporting and tracking component to assess progress for remediating identified forest road problems. Establishing a roads inventory with appropriate reporting metrics would provide valuable information on State and private landowner accomplishments to improve and repair roads and identify where further efforts are needed. Such an approach could help verify whether the combination of current rules and the Oregon Plan's voluntary measures are effective in managing forest roads to protect streams on a reasonable timeframe.

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[4] P. 47 of IMST

One study was a two-year, Oregon Department of Forestry monitoring study which examined the efficacy of current wet weather use requirements and determined (through the use of monitoring data) that changes to their BMPs were necessary to protect water quality. (the purpose of the wet weather road use rule is to reduce delivery of fine sediment to streams caused by the use of forest roads during wet periods that may adversely affect downstream water quality in Type F and D streams. While the requirements may be good for active and inactive roads, this does not apply to legacy roads.

I think the most important missing components that need to be brought into this rationale for "legacy roads" are the voluntary monitoring program and the USFS monitoring program. I will be working to build on these two issues this week.

In conclusion, NOAA and EPA find that a compelling case has not been made regarding the adequacy of Oregon's forest road program, especially as it relates to forest roads. While the state has a voluntary program to address legacy road issues, it is neither comprehensive nor is it designed to monitor and track progress toward rehabilitating those roads having the most serious impacts on water quality. The state is moving toward such a program only conceptually and until information describing the design and implementation of such a legacy road program is provided to the agencies, NOAA and EPA feel strongly that this element of Oregon's program is not sufficient.

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**Comment [AC1]:** For consistency in style with how we write the decision rationales, I think it would be good to look to the rationales Don drafted for new devel and OSDS.

I don't think the current style of this rationale matches well. It focuses too much on reiterating what we stated in the proposed findings. We don't need to do that. We can just state X or Y. Use the Dec. 2013 proposed findings doc as a starting point, add some science up front to explain why add MM for roads are needed and make other adjustments to further strengthen the rationale based on the comments we received.

The decision rationale shouldn't include info on what we heard in the public comments. We can leave that for the response to comments document.

See suggestions below where I inserted the original proposed decision findings and flagged some areas that could be updated.

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**Comment [HA2]:**

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~~[Insert scientific studies here that support the above statements.]~~

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The federal agencies encourage the State to move forward with establishing a road survey or inventory program. To support an approvable coastal nonpoint program, the program should establish, among other things, a timeline for addressing priority road issues, including retiring or restoring forest roads that impair water quality, and a reporting and tracking component to assess progress for remediating identified forest road problems. Establishing a roads inventory with appropriate reporting metrics would provide valuable information on State and private landowner accomplishments to improve and repair roads and identify where further efforts are needed. Such an approach could help verify whether the combination of current rules and the Oregon Plan's voluntary measures are effective in managing forest roads to protect streams on a reasonable timeframe.

[4] P. 47 of IMST

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**Ex. 5 - Deliberative**
**Comment [HA4]:**
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~~NOAA/EPA's Proposed Findings document from December 2013 applauded the Oregon Board of Forestry for adopting Additional BMPs in 2003 addressing more restrictive use of roads during wet weather periods and for requiring an increase in the number of cross-drains needed, amongst other changes. The State based these changes on a number of studies.~~ One study was a two-year, Oregon Department of Forestry monitoring study which examined the efficacy of current wet weather use requirements and determined (through the use of monitoring data) that changes to their BMPs were necessary to protect water quality. (the purpose of the wet weather road use rule is to reduce delivery of fine sediment to streams caused by the use of forest roads during wet periods that may adversely affect downstream water quality in Type F and D streams. While the requirements may be good for active and inactive roads, this does not apply to legacy roads.

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**Ex. 5 - Deliberative**

**Comment [HA6]:**

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~~However, NOAA/EPA noted in the December 2013 document, that we believe a significant portion of the road network (defined as active, inactive, and abandoned roads) was still delivering sediment into surface waters. Furthermore, NOAA and EPA stated that the new drainage BMPs adopted by the state in 2003 applied only to new road construction and reconstruction only and that the new rule changes did not sufficiently address water quality impacts from 1) legacy roads (defined by EPA as those parts of the forest road network which are not meeting state standards) and , 2) other portions of the road network that are impacting water quality but are not being constructed/re-constructed. And are thus not covered by the new BMPs.~~

~~We noted that the state does have a voluntary program – known as the "Oregon Plan for Salmon and Watersheds" (Oregon Plan) – which addresses roads not covered by the 2003 rule changes, but that the state has not adequately documented how the program satisfies the additional management measures for forest roads required by NOAA and EPA. In short, the agencies found that the state had not provided sufficient data documenting the effectiveness of their voluntary program.~~

~~The agencies referenced Oregon's proposed Implementation Ready TMDL for the Mid-Coast Basin as showing a promising strategy for inventorying and assessing roads and developing a reasonable timeline for fixing road segments having impacts to water quality. This approach would have included tracking and reporting requirements, an implementation strategy which would have addressed higher risk roads, and milestone-based targets to ensure progress.~~

~~In addition, the state had noted plans to establish a roads survey program by 2014 and alluded to an Interagency Agreement it was planning to enter with the US Forest Service to update its geographic information system data on its road networks, but little additional information about these prospective efforts was provided.~~

~~As part of the public comments generated by our December 2013 proposed findings, NOAA and EPA received comments specific to forest road concerns from approximately twenty individuals and interest groups, as well as a submittal from the State of Oregon. An overwhelming number of comments received concurred with NOAA and EPA's proposal to~~

~~disapprove Oregon's program based at least in part on the shortcomings found in the states' forest roads program. Comments from the state and industry contend that Oregon's program conforms with EPA's 6217 guidance and that EPA and NOAA should approve the states' program.~~

~~Comments that supported EPA's contention that the states' forest road program is in adequate to protect water quality cited many studies lining the presence of forest roads to impacts on surface waters and aquatic habitat by increasing sediment delivery and turbidity. The cumulative impacts of roads are especially damaging according to many of these commenters. There was also a sentiment that Oregon's forest practices rules impose generic BMPs and do not use pertinent water quality data to drive road management decisions. An important point was made that Oregon's road location rule does not require operators to *avoid* water quality impacts, it only requires them to *minimize risk*. Finally, a number of comments focused on the role of legacy rods, claiming that most forest roads in Oregon's State Forests were constructed prior to 1971 and that these older roads were often intentionally designed to discharge stormwater directly into streams, using ditches, channels, and culverts to move stormwater off of the road and into the existing stream network. Consequently, a significant amount of the road network in most state forests remains hydrologically connected to a stream network.~~

**Comment [AC7]:** This point could be added to the existing discussion above as to why the state's existing rules are not sufficient.

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~~Comments from the state, industry and some individuals argued that Oregon's forest roads program is a success and that it has shown the ability to tighten BMP requirements through rulemaking when there is evidence of shortcomings. These comments point out that the state has a voluntary program developed under the Oregon Plan which as spurred forest landowners to implement measures to improve water quality by identifying risks and prioritizing roads for remediation. Finally, these commenters noted that the state plans to enter into a cooperative agreement with the US Forest Service to update its statewide geographic information system in order to randomly evaluate current and potential roads-related issues.~~

**Comment [AC8]:** This is a summary of the comments we received. This isn't appropriate for the decision doc. Rather, we should make sure our response to comments document captures these items.

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In conclusion, NOAA and EPA find that a compelling case has not been made regarding the adequacy of Oregon's forest road program, especially as it relates to forest roads. While the state has a voluntary program to address legacy road issues, it is neither comprehensive nor is it designed to monitor and track progress toward rehabilitating those roads having the most serious impacts on water quality. The state is moving toward such a program only conceptually and until information describing the design and implementation of such a legacy road program is provided to the agencies, NOAA and EPA feel strongly that this element of Oregon's program is not sufficient.